

CLAIMS

1. A metal halide lamp comprising:
an arc tube made of translucent ceramic and having a main tube
5 part in which a pair of electrodes are disposed; and
an outer tube housing the arc tube therein, wherein
 $4.0 \leq L/D \leq 10.0$, where L is a length of a space between the
electrodes and D is an internal diameter of the main tube part,
 $R/r \geq 3.4$, where R is an internal diameter of the outer tube
10 and r is an external diameter of the main tube part, within a region
positionally corresponding to, in a radial direction of the outer
tube and the arc tube, the space between the electrodes, on a
cross-sectional surface where an outer circumference of the arc
tube comes closest to an inner circumference of the outer tube,
15 and
 $M \leq 4.0$, where M (mg/cc) is a density of mercury enclosed in
the arc tube.
2. The metal halide lamp of Claim 1, wherein
20 $R/r \leq 7.0$.
3. The metal halide lamp of Claim 1, wherein
a sodium halide and at least one of a cerium halide and a
praseodymium halide are enclosed in the arc tube.
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4. The metal halide lamp of Claim 2, wherein
a sodium halide and at least one of a cerium halide and a
praseodymium halide are enclosed in the arc tube.
- 5 5. The metal halide lamp of Claim 1, wherein
a degree of vacuum inside the outer tube is no more than 1×10^3
Pa at 300 K.
6. The metal halide lamp of Claim 4, wherein
10 a degree of vacuum inside the outer tube is no more than 1×10^3
Pa at 300 K.
7. The metal halide lamp of Claim 1, wherein
An external surface of the arc tube directly faces an internal
15 surface of the outer tube.
8. A luminaire comprising:
a metal halide lamp recited in one of Claims 1 to 7; and
a lighting circuit for illuminating the metal halide lamp.